

## Whatever happened to TD<sup>2</sup> ♦

**Nick Rushby, Jan Seabrook  
Conation Technologies Limited  
and Bob Fairbrother**

**Το μακρινό φως είναι ένα Φοίνικας**

### **In the beginning**

In his report on the Clapham Railway Disaster, Anthony Hidden QC recommended that British Rail should carry out a major overhaul of its signal and telecommunications training. Specifically, he recommended that “BR should give technical training as necessary to ensure that efficient and safe practices are carried out by all technical staff” and that “BR shall provide refresher courses ... at intervals of not more than five years.”. The estimated cost for implementing these recommendations, £50 million, was less of a problem than the timescale: it was estimated that using existing resources it would take seven years - and that was unacceptable.

Under the guidance of Peter Wing, a joint team of S&T training experts and external consultants specialising in innovative training solutions was put together on the challenging task of re-engineering the training process and delivering the required training system within two years and with a budget of £15 million. This was the Training Development and Delivery Programme – TD<sup>2</sup>.

The existing system delivered training to technicians when their managers felt that they needed it. At times it felt as if the training was being driven, not by the needs of the individual or his/her job role, but by the coincidence of a training place and the individual being available at the same time. There were apocryphal stories of people going on the second part of a two part course before they had attended the first part, and of training on equipment that was not to be found in their particular area. While these were probably exaggerated, the system could well be described as a sheep dipping process. To achieve the standards demanded by the Hidden Report it was necessary to move to more focused training to meet identified needs based on competence requirements. Refresher training would be provided as and when competence gaps were identified, rather than waiting for a fixed time to elapse.

### **The driving force**

The costs, at a “mere” £15 million, should not have been a problem because, from the outset, the project team strived to highlight to the customer the benefits of trained and competent staff. At that time the effective customers were the railway businesses, which had ownership of both trains and infrastructure. A novelty at the time, a study was prepared by professional risk assessors, which demonstrated that the TD<sup>2</sup> project would show a profit for the customer within 2 years simply by the avoidance of train delays attributable to lack of competence in S&T staff. And that is as well as the benefits to safety.

It seemed like a winner, but despite the potential benefits, despite also the project gaining several major national awards and other accolades for its use of new technology, obstructions were put in the way of progress by almost all sides. In the end, political objectives took over, and success was impossible in the climate that followed. Sadly, in the light of the events of the past few years, the folly of that policy is difficult to comprehend.

---

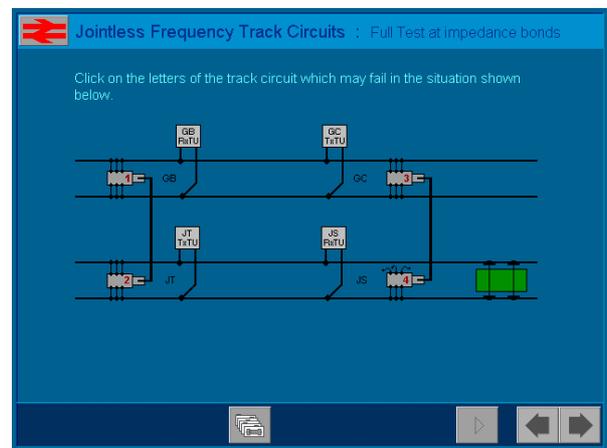
♦ First published in *IRSE News* Institution for Railway Signal Engineers, London. 9-11.

## Development and delivery

The effort was targeted on areas of S&T training that were considered to be high priority by S&T engineers in the field – equipment for which little or no effective training currently existed, where there were large numbers of technicians needing training, or where recurrent faults were causing repeated call-outs and delays.

Subject matter experts, specialists whose expertise was widely acknowledged, were identified to work with contractors with a proven track record of developing effective and efficient training materials using a range of media. Instead of dealing with each training module separately, call-off contracts were set up with a number of contractors. These were a departure from traditional practice and were welcomed by the procurement team at Derby.

One development team, established at the Crewe Training Centre deserves special mention, the '1812' Group. This group (so called because the first materials were due to be delivered on 18<sup>th</sup> December) brought together trainers from within the S&T organisation and outside training consultants, some with skills in technology based training, with the aim of pioneering a fresh way to look at how best of class training materials could be developed for S&T. Involvement of S&T training developers and instructors would enable this new approach to be continued for updating courses outside the TD2 programme and applied when new courses were developed after the end of the main programme. This team took responsibility for producing training on level crossings and track circuits.



The TD<sup>2</sup> Programme produced about 2000 hours of training materials, the majority of which focused on specific equipment, although some dealt with the basic skills required of S&T maintenance and faulting technicians. Many of the courses used a mixture of classroom based, instructor-led training with technology based training. Nowadays, this would be called 'blended' learning, now an acknowledge best practice in training. Eight years on, we can see that British Rail Infrastructure Services were well ahead of the field, deploying an integrated training system that would be the envy of many large organisations today.

The TD<sup>2</sup> training was closely linked to the licensing scheme being developed by the IRSE, being based firmly on a competence based approach. Many of the underpinning training analysis documents were used as background information during production of the Assessable Workplace Standards Documentation. A secondary project (about which more might be written in the future) investigated the use of hand-held PDAs to collect evidence for workplace assessment on the track.

The new materials had a mixed press. They required a different way of training and not all of the instructors in the S&T training centres were comfortable about working with the new approach and use of technology. However, there was little criticism of the content and accuracy of the training. The close involvement of acknowledged S&T experts ensured that the training delivered best practice in strict accordance with the rulebook, and covered all of the required competences. It was warmly endorsed by Sir Bob Reid

## Then came privatisation

Then, almost at the same time as the TD<sup>2</sup> training materials entered service, British Rail was privatised. Over a short period of time, the central training function was fragmented and the

individual private companies became responsible for training their own staff. The network of S&T training centres was broken up and passed through a succession of owners. The focus of attention was on the bottom line and achievement of short term objectives and the contribution that effective training could make to profitability was largely ignored. The training materials that were distributed from the TD<sup>2</sup> project office in Paddington continued to be used for a while in some of the training centres but, as staff were redeployed and new people came into newly established training organisations within the IMCs, continuity was lost and the memory of the materials faded.

Over the past two years we have found instances where the videodisk-based workstations were consigned to a skip because no-one knew what they were or someone decided that they were obsolete and needed space for new PCs. Then, the videodisks were discarded because there was nothing to play them on. And then the rest of the training materials were thrown away because the technology based part of the learning blend was missing. Training settled back into its earlier mode of instructor-led, topic driven, one week courses. *Sic transit gloria mundi.*

### **The renaissance**

Yet, the need for more effective and efficient training for the railway industry is still recognised by all of the key stakeholders – by government, the professional bodies, the rail training organisations and employers. The causal chain - that improved training will lead to the more competent workforce that is required to deliver a safe and reliable railway – is now acknowledged by an increasing number of decision makers. The issue is not whether training should be improved, but how consistent training, delivering best practice can be achieved across the industry. Beyond the public perception that the railway is neither safe nor reliable, lies the real cost of training. Whatever form the Centre for Rail Skills takes when it is fully developed will require an infrastructure to support the management and delivery of training; it will need training content – high quality and effective training materials.

The technology used to deliver the TD<sup>2</sup> training, although advanced for the time, has now been superseded. The computer software is no longer supported and spare parts are no longer available for the videodisc players. Yet, the underlying training content is still valid, and could be updated and brought back into service

The signal and telecommunications training materials developed by the TD<sup>2</sup> project in the 1990s could provide a significant starting point for that core content. They need to be updated to reflect current best practice and reflect changes in the Rule Book. They need to be updated so that they can be used with current technology. The capabilities of personal computers have increased vastly over the past few years. The TD<sup>2</sup> materials no longer require specialised videodisk systems built into caryls in dedicated training centres: they can be re-purposed so that they will run on a typical desktop or laptop PC. They could be accessed from the workplace, dedicated training centres and by individuals from home.

Work is now underway to identify the current S&T training priorities, to assess the effort that would be required to meet some of today's training needs by updating existing TD<sup>2</sup> materials, and to investigate ways in which that work should be funded.

(Nick Rushby and Jan Seabrook work for Conation Technologies, a strategic consultancy working for the training industry and its clients, with a particular focus on the rail industry training. [nick.rushby@conation-technologies.co.uk](mailto:nick.rushby@conation-technologies.co.uk); [jan-seabrook@conation-technologies.co.uk](mailto:jan-seabrook@conation-technologies.co.uk). Bob Fairbrother has thirty years experience of signal engineering but is now pursuing academic interests. [RbrtFair@aol.com](mailto:RbrtFair@aol.com) )